Achieving Network

Operations Excellence through Customer Involvement

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NTT Communications

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The Challenge

Newer and faster software applications have heightened customers' awareness and sensitivity to Digital Transmission Impairments or DTIs in their global data networks. Short but infrequent periods of errored seconds, switching hits, restoration latency and unplanned maintenance on the digital network are among the most prevalent. With some customers approved maintenance windows are surfacing as an inconvenience. It may be of interest to note that DTIs, in the order of milliseconds, can cause software application to halt resulting in costly missed production schedules and file transfers.

One successful approach for achieving operational excellence in addressing DTIs would be to seek customer involvement. Customer insight and concerns can be conveyed to IT operations through timely meetings and sanity checks. Surveys, MSAs, SLAs, escalations and customer forums are among the many other channels available to customers for communicating their service related perceptions and expectations to IT operations.

These communiqués offer a customer's point of view or Report Card of existing services. They may give testimony to a carrier's strengths, where improvements are suggested and highlight any inconsistencies between their expectations and the service offered. Having these inputs IT operations can evaluate the need for incremental improvements in processes, maintenance philosophies and Key Performance Indicators or KPIs. The objective is "lessen the gap between the service provided and the customer expectation".

Customer involvement may suggest the need for incremental improvements such as adding unique test equipment to inventories, modifying maintenance procedures and discussing goal performance with incumbent carriers and vendors. Other measures such as reducing call waiting and event notification times and possibly the number of telephone prompts at call centers could also improve customer perception. The theme here is for "continuous improvement through customer feedback and change".

From an investment perspective, massive change may well be cost prohibitive. However, a cost-justified incremental improvement would be more supportable and would place IT operations on a new path. The important point to be made is "it makes no business sense continuing down the same path with the expectation that something will change".

This would be a suitable place to introduce organizational structure and how it can best support customer involvement. IT operations have many roles however the most relevant to this discussion are Network Operations and the equally important counterpart of Customer Service. From a service quality perspective both organizations compliment each other.

The Network Operations piece can best be summarized as the organization which keeps things maintained, moving and on time. Tasked to Network Operations is the isolation and resolution of DTIs. The Customer Service organization, on the other hand, is the customer facing service delivery arm of IT operations which distinguishes itself as the customer's advocate for service related issues. It is at this juncture that IT operations and the customer interact on service issues.

For the purpose of this article the "Achilles' Heel" for IT operations and customer alike might be summed up with three scenarios. In all three scenarios customer involvement has a role to play.

The first is a few seconds of DTI. While sufficient time for network equipment and customer CPE to record the DTI it is, in most instances, not adequate time for field personnel to react and isolate the fault causing the DTI. If the DTI is reoccurring it is classified as chronic. Chronic DTIs have unique characteristics and often require an extraordinary amount of time to diagnose. Chronics are usually directed towards a focused group charged with the responsibility of a best effort root cause analysis and resolution. In pursuit of resolution, the customer may be asked for a number of planned maintenance windows to systematically isolate the fault. For IT operations to be successful in its endeavor, customer participation and involvement is vital.

The second occurs when the network equipment records the DTI however the event did not meet the parameters specified by the KPI for a DTI. Consequently the DTI, while it did occur, is not recognized nor annunciated to field personnel for resolution. Keep in mind that the IT operations' demeanor is motivated by task-oriented processes directed towards achieving end goals and KPIs. Therefore in this case, Network Operations and Customer Service should consider customer involvement to determine the level of discomfort caused and make recommendations for a possible adjustment in KPI parameters. It may be interesting to note that KPIs are the metrics used by IT operations to help define and measure progress towards a specific goal. To be effective for both customer and IT operations the KPI must be specific, meaningful, attainable, related and time bound.

The third and most difficult takes place when the DTI is reported by the customer and not recorded by the Network. In this case customer involvement is crucial and Customer Service has the role of documenting the customer's experiences and placing it with Network Operations for testing. The outcome may determine that further investigative testing is required either separately or jointly by the customer and IT operations.

In all three scenarios, it may be important to note that many DTIs are attributable to undocumented and unrelated work, aging network elements, climatic conditions and ocean floor seismic activity affecting submarine cable systems to name a few. Furthermore many of these events are nonrecurring however they still need to be investigated. Choosing to address the vastness of DTIs is the first step in their improvement and will in most cases require customer involvement. Other possibilities to consider are the outside influences of man-made and natural disasters. Since the year 2000, the Federal Emergency Management Agency declared 476 disasters caused by fires, floods, civil unrest and terrorist attacks, latest being Hurricanes Gustav and Ike.

In closing, operational excellence can be achieved through continuous improvement fostered by feedback and incremental change fueled by customer involvement. As previously mentioned it makes no business sense continuing down the same path having the expectation that something will change.

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